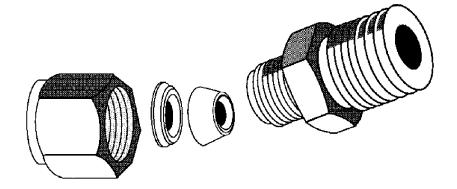
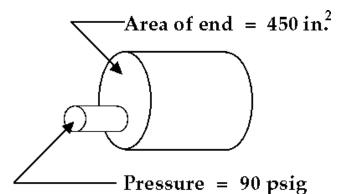
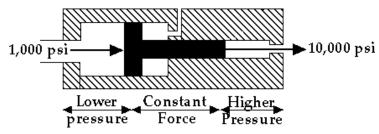
#### DEPARTMENT OF ENERGY

### Intermediate Pressure Safety







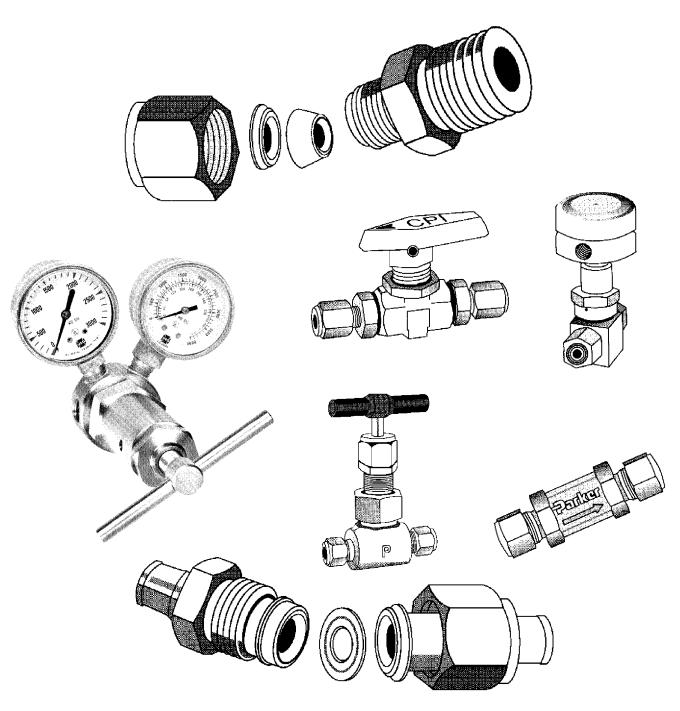




**Prepared by:** 

### **APPENDIX D**

### **Hardware & Equipment**



Taken from the DOE Pressure Safety Guidelines Manual Revision 2, December 1993

#### **Lawrence Livermore National Laboratory**

# HS-5040 - INTERMEDIATE PRESSURE SAFETY

## Course Outline (4 hours)

| Introduction and objective15 minutes                                     |
|--|
| Definitions and concepts 45 minutes                                      |
| ~ Break ~  |
| Intermediate pressure fittings and equipment                             |
| ~ Break ~  |
| Pressure testing45 minutes   |
| Appendix A Part I; Sealants and Lubricants for pipe and straight threads |
| Part II; Fluid vs. Seal material compatibility chart                     |

Course evaluation, discussion and quiz

| Lawrence Livermore National Laboratory |
|--|
| PRESSURE TEST/INSPECTION RECORD        |

| Γest No. |   |
|----------|---|
| Date:    | _ |
|          |   |

| BASIC INFORMATION: | Enter here and on original | (or new | ) LLNL Pressure | e Tested label. |
|--------------------|----------------------------|---------|-----------------|-----------------|
|                    |                            |         |                 |                 |

| BASIC   | INFORMATION: Enter here       | e and on original (or new) | LLNL P   | ressure Teste | ed label.            |          |              |
|---------|-------------------------------|----------------------------|----------|---------------|----------------------|----------|--------------|
|         | LLNL PRESSURE TESTED          | Location of                | vessel ( | or system):   | Bldg                 | F        | Rm           |
| ASSY.   | FOR MANNED AREA               | Description                | n:       |               |                      | _        |              |
|         | TY NOTE                       |                            |          |               |                      |          |              |
| M.A.W   | .Р                            | PSIG                       |          |               |                      |          |              |
| FLUID   |                               | Manned Ar                  | ea L     | . F           | Remote               | L        |              |
| TEMP.   | то                            | *F                         |          | _             |                      |          | (2) \        |
| REMA    |                               | Pressure V                 | 'essel L | _             | Pressure System      | L        | (Check Box)  |
| TEST N  | NO. T.R.                      |                            |          |               |                      |          |              |
| EXPIR   | ATION DATE                    |                            |          |               |                      |          |              |
| ВҮ      | DATE                          | ←Pressure                  | Insecpt  | or's name an  | d date of test or ir | nspectio | on.          |
|         |                               |                            |          |               |                      |          |              |
| TEST IN | NFORMATION:                   |                            |          |               |                      |          |              |
| 1.      | Test Pressure                 |                            |          |               |                      |          | _ PSIG.      |
| 2.      | Testing Fluid (oil, He, etc.) |                            |          |               |                      |          | _            |
| 3.      | Test temperature              |                            |          |               | C (                  |          | _° F)        |
| 4.      | Test Report Number (H.P.      |                            |          |               |                      |          | _            |
| 5.      | Responsible Designer          |                            | User De  | eptl          | Jser Payroll Acct.   |          |              |
| 6.      | Responsible User              |                            | User Div | /             |                      |          | _            |
| 7.      | Diameter measurements (f      | for pressure vessel tests  | only)    |               |                      |          |              |
| Locatio | on (marked)                   | Before testing             |          | After test    | ing                  | Differe  | nce (+ or -) |

#### INSPECTION INFORMATION:

Inspect the following and check ( ) appropriate column, explaining as required.

- 1. General appearance of system (or vessel)
- 2. Relief devices are: a. Properly set (have them checked; reset)
  - b. Properly sealed
  - c. Pointed in safe direction or safely vented
- 3. All fittings and vessel seals are leak tight
- 4. Replaced/added fittings, gauges, valves, (and piping\*) are properly rated
- 5. All system components are adequately secured
- 6. Valve packing nuts are tight, and locked (if locking type)
- 7. Oil is not apparent on or in\* gas (especially oxygen) systems
- 8. The outside surface of the vessel shows no evidence of strain, damage, o corrosion
- 9. The inside surface of the vessel shows no evidence of strain,
- 10. Lined vessel vent path is unobstructed: Check with helium
- 11. Vessel or system seals are leak-tight. Have replaced as required
- 12. The vessel or system is safe for continuing operation
- 13. Vessel or system was pressure tested within the last 6 years, or as required by the safety note. (If not, and certified for manned-area operation, retest it and submit a Pressure Test Record.)

| * ( | Consider assurance | by the | Responsible | User as | satisfactory | verification |
|-----|--------------------|--------|-------------|---------|--------------|--------------|
|-----|--------------------|--------|-------------|---------|--------------|--------------|

|   | factory | tactory | Remarks |
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Satis- Unsatis-

| Pressure Inspector |  |
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#### **APPENDIX A**

Part I Sealants and Lubricants for Pipe and Straight Threads

Part II Fluid vs. Seal Material Compatibility Chart